

Risk management in civil engineering

advanced course

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RISK MANAGEMENT IN WATER AND WASTEWATER UTILITIES

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Abstract

The provision of safe drinking water and the protection of public health and the environment through the treatment of wastewaters is increasingly informed by risk-based decision-making. Aspects of utility management such as process design and optimisation, asset management and compliance monitoring rely on a mature understanding of process risk within a broader context of business and environmental risk management.

Implementation of the revised (2004) World Health Organisation (WHO) guidelines on drinking water, international developments in risk-based regulation and increasing customer expectations of water quality have further heightened the need for utility managers and process operators to be conversant in the principles of risk management.

For water and wastewater utilities, risk management is now regarded as a key business function. Understanding risk and being able to implement risk management is critical to the provision of safe drinking water. As part of a move towards a more strategic, forward looking approach to utility management, the International Water Association (IWA) is promoting a risk-based approach to water utility management from catchment to tap, through implementation of the Bonn Charter (2004). The Charter recognises the pivotal role played by water suppliers in managing drinking water quality and supports their primary role in the development and implementation of drinking water safety plans (DWSPs).

This presentation provides an overview of the issues and introduces some of the key themes in risk management for water and wastewater utilities.